

In the Claims

1. (currently amended) A method of establishing DC bias levels in an RF power amplifier having multiple power amplifier stages, comprising:

providing a first power amplifier stage having an input and an output, wherein the first power amplifier stage amplifies an input signal received by the power amplifier stage input to generate an output signal at the power amplifier stage output;

generating a feedback signal using the input signal and the output signal of a the first power amplifier stage; and

using the feedback signal to control the DC bias level of a second power amplifier stage.

2. (original) The method of claim 1, wherein the DC bias level is generated to cause the DC levels at the input and output of the first power amplifier stage to have a predetermined relationship.

3. (original) The method of claim 1, wherein the DC bias level is generated to cause the DC levels at the input and output of the first power amplifier stage to be approximately equal.

4. (original) The method of claim 1, wherein the feedback signal is generated based on the DC level at the input and output of the first power amplifier stage.

5. (currently amended) The method of claim 4 ~~claim 3~~, wherein the feedback signal is generated by comparing the DC levels at the input and output of the first power amplifier stage.

6. (currently amended) The method of ~~claim 4~~ ~~claim 3~~, wherein the feedback signal is used to set the DC levels at the input and output of the first power amplifier stage to approximately half of the supply voltage.

7. (original) The method of claim 1, wherein the RF power amplifier comprises a non-linear power amplifier.

8. (original) The method of claim 1, wherein the second power amplifier stage comprises a predriver circuit.

9. (original) The method of claim 1, wherein the second power amplifier stage is adapted to receive an RF input signal.

10. (currently amended) A method of establishing DC bias levels in an RF power amplifier having multiple power amplifier stages, comprising:

providing a first power amplifier stage having an input for receiving an input signal, wherein the

first power amplifier stage amplifies the input signal to generate an output signal at an output of the first power amplifier stage;

sensing the DC bias level of the input signal at the input and of the output signal at the output of
a the first power amplifier stage;

generating a feedback signal using sensed DC bias levels; and

coupling the feedback signal to a second power amplifier stage to control the DC bias level of the second power amplifier stage.

11. (original) The method of claim 10, wherein the DC bias level is generated to cause the DC levels at the input and output of the first power amplifier stage to have a predetermined relationship.
12. (original) The method of claim 10, wherein the DC bias level is generated to cause the DC levels at the input and output of the first power amplifier stage to be approximately equal.
13. (original) The method of claim 10, wherein the feedback signal is generated by comparing the DC levels at the input and output of the first power amplifier stage.
14. (original) The method of claim 10, wherein the feedback signal is used to set the DC levels at the input and output of the first power amplifier stage to approximately half of the supply voltage.
15. (original) The method of claim 10, wherein the RF power amplifier comprises a non-linear power amplifier.
16. (original) The method of claim 10, wherein the second power amplifier stage comprises a predriver circuit.
17. (original) The method of claim 10, wherein the second power amplifier stage is adapted to receive an RF input signal.

18. (currently amended) An RF power amplifier comprising:
a first power amplifier stage having an input for receiving an RF input signal, wherein the first power amplifier stage amplifies the RF input signal to generate an output signal at an output of the power amplifier stage;
a second power amplifier stage; and
an amplifier having a first input coupled to the output of the first power amplifier stage, a second input coupled to the input of the first power amplifier stage for sensing the DC bias levels at the input and output of the first power amplifier stage, and an output coupled to the second power amplifier stage to control the DC bias level of the second power amplifier stage.

19. (original) The RF power amplifier of claim 18, wherein the DC bias level is generated so as to cause the DC levels at the input and output of the first power amplifier stage to have a predetermined relationship.

20. (original) The RF power amplifier of claim 18, wherein the DC bias level is generated so as to cause the DC levels at the input and output of the first power amplifier stage to be approximately equal.

21. (original) The RF power amplifier of claim 18, wherein the feedback signal is generated based on the DC level at the input and output of the first power amplifier stage.

22. (original) The RF power amplifier of claim 21, wherein the feedback signal is generated by comparing the DC levels at the input and output of the first power amplifier stage.

23. (original) The RF power amplifier of claim 18, wherein the feedback signal is used to set the DC levels at the input and output of the first power amplifier stage to approximately half of the supply voltage.

24. (original) The RF power amplifier of claim 18, wherein the second power amplifier stage is adapted to receive an RF input signal.